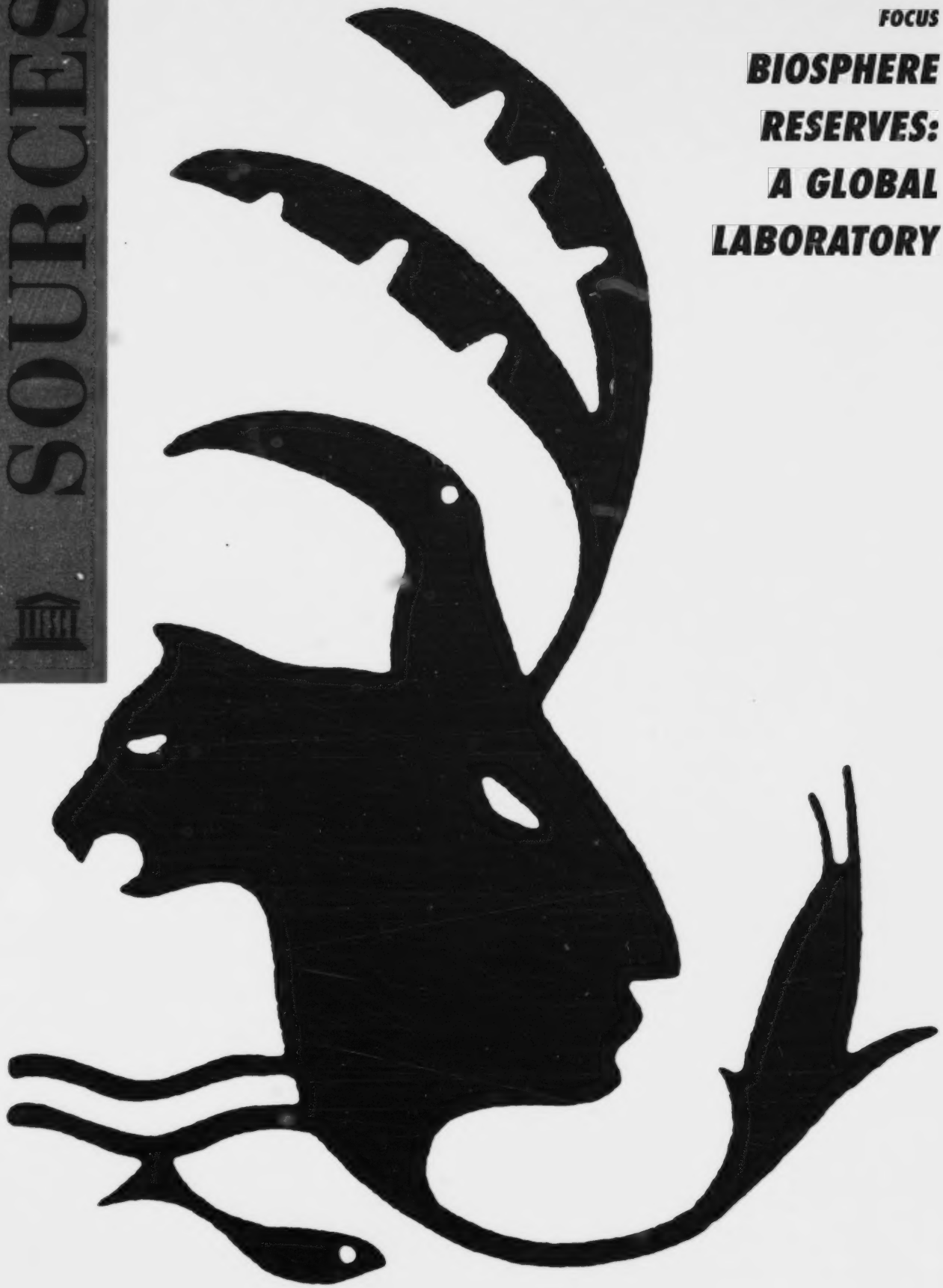
UNESCO SOURCES

N° 31 - NOVEMBER 1991

FOCUS

BIOSPHERE RESERVES: A GLOBAL LABORATORY



WEST AFRICA
NEWS AGENCIES TAKE OFF

THE ONLY WAY OUT
EDUCATION FOR STREET CHILDREN

Readers, we have reserved this page for your comments, suggestions and criticisms. Consider it yours !

LEGITIMATE ACTION

Mehmet Hasan, President
The Turkish Cypriot Cultural and Educational Association of the United States of America
Englishtown
New Jersey, USA

Dr. Patrick O'Keefe's article titled *"Whose Culture? Whose Property?"* (No.28) calls for comment and clarification, since it wrongly describes the legitimate Turkish intervention in Cyprus of 1974 as an *"invasion"* and contains misleading information pertaining to the mosaics stolen from a church located in the Turkish Republic of Northern Cyprus.

I wish to point out that the Turkish action in 1974, which followed the Greek coup d'etat of 15 July of that year aimed at annexing the island to Greece (ENOSIS), was a legitimate intervention undertaken in accordance with the Treaty of Guarantee of 1960. The term *"invasion"*, therefore, is a misnomer which should in no way appear in a UN document. I would like to recall that the appropriate term used in all relevant UN Resolutions or documents is *"intervention"*.

As to the mosaics which had been stolen from a church in Northern Cyprus, it is clear that they should have been returned to their original setting in the Turkish Republic of Northern Cyprus which is the country of origin. The Greek Orthodox Church, which itself is holding large amounts of Turkish Cypriot property in Southern Cyprus, cannot claim ownership of the mosaics, and the U.S. Court's decision to return the mosaics to the Greek Orthodox Church was, I am afraid, a political rather than a legal decision.

UNESCO Sources, which is not an official document of the Organization, regularly opens its columns to outside specialists who freely present their own points of view.

May we point out, in any case, that while Article IV of the Treaty of Guarantee indeed refers to "the right of intervention", the term used in Security Council and General Assembly resolutions is "occupation". - ED.

ALL THE MEMBERS OF OUR CLUB

Ngoy Muyembe-Mybé
Director, UNESCO Club NTCHEKO,
Kalemie, Zaire

All the members of our Club join me in expressing our deep appreciation of your magazine. It is excellent from all points of view. I therefore circulate it as widely as possible and do my best to share your ideas which I find most logical and extremely well-founded.

DOUBTS AND QUESTIONS

N.O. Kabwasa
Sector of Social and Human Sciences
UNESCO

Your dossier, *"Raiders of the Cultural Ark"* (No.28) raised in my mind a number of doubts and a few questions which I would like to share with you and your readers.

I have doubts, or rather I lack firm certitudes as to the correct attitude to adopt when faced with this ticklish problem.

What should be done, for example, when national museums lack the necessary funds and equipment for conservation, thus involuntarily jeopardize the cultural property entrusted to them?

What can we say when wooden masks are attacked by termites in halls which lack air-conditioning? What should we think when museum guards go for months without pay or when their salaries are well below a minimum living wage? The temptation to pinch some of these objects then becomes very strong, especially since foreign buyers are constantly hounding museum personnel with tantalizing offers.

These objects, alas, are sometimes better protected elsewhere than in their countries of origin. Thanks to Tervuren, for instance, the cultural heritage of the Congo, stolen or illegally exported, has taken on added lustre. Regretfully, this will be true for as long as conditions of protection and safeguard in the original countries do not comply with minimum standards - and it is not by a long shot only a question of material conditions. It is also imperative that the people in these countries adopt a more protective attitude towards their cultural heritage, for these objects were neither created for aesthetic contemplation, in other words, for their plastic beauty. Generally they served for religious observances or as utensils of daily life. The disappearance of many religious practices and changing life-styles means that very few people endow these objects with the importance they deserve.

Yet, as we know, without deep recognition of a nation's cultural heritage as a vector for development, governments do not provide the financial wherewithal to build and equip museums and to recruit, train and maintain a competent and well-paid staff.

Now comes the big question. Should we simply allow these objects to leave the country legally - or, on the other hand, watch them disintegrate under the deteriorating conditions in which most African museums find themselves today? It might be a good idea to call on private citizens to compensate for the shortcomings of their governments. But, in this case, should the private sector take over the job completely or rather serve as a complement to State action? Unfortunately, culture is costly and private foundations rare in this domain.

A REVELATION !

Stephen Eward
Bujumbura
Burundi

I have just read an issue of UNESCO Sources: a revelation! Please add my name to your mailing list. I am convinced that your publication will prove particularly useful in the Pedagogical Bureau for Secondary Education where I work as a volunteer in charge of design and printing of school textbooks. My colleagues and myself are certain to find in your pages a wealth of information dealing with the elaboration of pedagogical projects.

IN UNISON

Rarely has there been such unanimity at a General Conference where all the delegates endorsed the notion of "common practical ideas" that Jacques Maritain, philosopher and head of the French delegation advocated as UNESCO's modus vivendi at the second General Conference in 1947.

For their part, François Mitterrand, Javier Perez de Cuellar and Federico Mayor spoke in unison as it were, when they addressed the 26th session of the General Conference (October 15 - November 7, 1991). Their speeches and a message from Mikhail Gorbatchev were marked by similar points of departure and agreement on what targets UNESCO should set itself and how it should attain them.

"A second chance", "second birth", "new foundation", "renaissance": world leaders tried to "out-synonym" each other to qualify this moment where the end of the bi-polar world should lead to a revitalisation of UNESCO.

The danger of a nuclear holocaust now buried, the cold war dead, "walls have come down, prisons have opened and minds have been freed": "we are experiencing at present something like another post-war period".

It is time now for UNESCO to "re-establish links with the community of minds", to "constitute a forum to deal with all aspects of the major problems of civilisation in the modern world", and to elaborate a way of thinking "that guides our common endeavours and enlightens our perceptions".

Where should this new mindset derive its inspiration from? Peace comes first to mind but also democracy, hence human rights and development, because "democracy and progress cannot be built on a foundation of poverty and injustice". Here lies the importance of "ethics as a guiding principle of both theory and practice", a "humanistic ethic" based on the dual imperative of "respect and justice" so as to give to the world "a deeper shared sense of conscience" and "the guide marks that humanity is seeking more than ever".

UNESCO has only one ambition: "universality in space, time and in learning". An aim that can only be realised if UNESCO "possesses or acquires the necessary means" and when "nations which have left the Organisation decide to return".

René LEFORT

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A GLOBAL LABORATORY

READEX

BOOKS

POVERTY, PROGRESS AND DEVELOPMENT

Despite tremendous advances in technology, the majority of nations are still trapped in poverty, while in the advanced industrialized countries, economic growth has marginalized or even

excluded such vulnerable groups as the young, the elderly, women and ethnic minorities.
The studies in this volume, by distinguished international specialists, explore the social mechanisms of pauperization, marginalization and exclusion, and examine the links and contradictions between development and progress in order to propose ways for reducing social injustices. Rich in important lessons, the book includes concrete experiences from India, China, Africa, Brazil and Egypt, along with reflections on misdirected development strategies applied without regard to the history and culture of countries.

● **Poverty, Progress and Development,** *edited by Paul-Marc Henry, UNESCO/ Kegan Paul International, 1991, 338 pp., 325 FF.*

Publications and periodicals are on sale at the Unesco Bookshop, or by order from Unesco Press, 7 place de Fontenoy, 75700 Paris, and in Member States through national distributors. Catalogue on request.

AFRICAN DEVELOPMENT SOURCEBOOK

The African Development Sourcebook, designed to facilitate communication and information sharing between development organizations and practitioners worldwide, provides details on 174 development networks based in 35 sub-Saharan African countries. The nature - social, cultural; economic - of these networks is described along with their efforts, strategies and major activities and the role of information exchange in strengthening and furthering their action. This excellent reference tool also contains pertinent data on development agencies and organizations and several annexes to facilitate information retrieval.

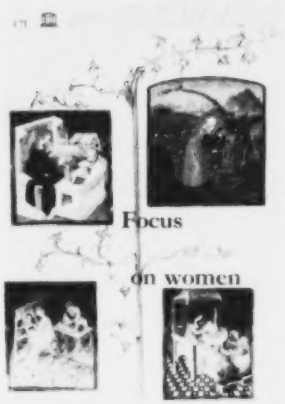
● **African Development Sourcebook.** *1st edition. Bilingual Fr/Eng. UNESCO 1991, 157 pp., 70FF.*

GUIDE TO THE INFORMATION ACTIVITIES OF EUROPEAN DEVELOPMENT NETWORKS

Like the *Sourcebook* above, this Guide provides development practitioners with an information source to facilitate communication and exchange. Containing profiles of 270 West European networks, it also offers an insight into the European contribution to development co-operation.

● **Guide to the Information Activities of European Development Networks,** *1st edition, UNESCO 1991, 259 pp., 110F.*

PERIODICALS



MUSEUM

Focus on Women. Presenting a panorama of interactions between women and museums in 17 countries, this issue of UNESCO's quarterly **Museum** (No. 171/3/1991) is full of surprises, starting with the cover illustrations - of four professional women portrayed in 15th century French manuscript illuminations. The articles, all but one of which were written by women, take a look at *"women pioneers"* like Queens and collectors in Portugal or, more recently, creators and active participants. They examine the images of femininity reflected in exhibitions, the way women are faring in museum professions and how their prospects there can be improved. Other topics include museums as instruments for improving the status of women generally, and the pros and cons of specifically women's museums.

NATURE & RESOURCES

Biotechnologies: promises and pitfalls. Devoted to the enormous potential of the *"microbial labour force,"* the articles in this issue (No. 27/3/1991) describe how techniques like genetic engineering and gene application are opening new vistas in the agricultural, pharmaceutical and health sectors. At the same time, however, the specialists stress the need for preserving our microbial heritage, including through such means as UNESCO's global MIRCENS (Microbial Resource Centres) network. With 13 Centres in 23 countries, MIRCENS is also helping ensure that the "biotechnological revolution" rather than accentuating the gap between poor and rich, will produce benefits for all. **Nature & Resources,** UNESCO's quarterly review of research for sustainable development, is designed to promote the use of scientific information in the decision-making process affecting the environment.

IMPACT of Science on Society

Prospects in contemporary biology. The Human Genome Project, one of the major scientific initiatives of recent years, is the main subject of this issue (No. 161). Aimed at deciphering the human genetic make-up, the vast international project will have important applications in biology and medicine, yet is also the subject of widespread scientific and public debate because of its social, ethical and legal aspects. Two other fields of research - the molecular biology of environmental stress and the control of cell growth - and their role in the understanding of common disease, are also dealt with here.

THE UNESCO COURIER

Environment and Development: a Global Commitment. Announcing the UN Conference on the Environment to take place in Rio de Janeiro (Brazil) next year, the November **Courier** traces UNESCO's pioneering work in this vital field. This issue also features an interview with the renowned French oceanographer Jacques-Yves Cousteau.

PRESIDENT OGOT: A LOYAL FRIEND

The 26th session of UNESCO's General Conference has just elected one of its most loyal friends to the presidency. Since 1964, Bethwell Ogot has been present at each one of these grand rituals that take place every two years. In various roles: Delegate of his country, Kenya. President, for the last seven years, of the International Committee for a *General History of Africa*. Since 1987, member of the Executive Board.

BETHWELL OGOT
(Photo UNESCO/D. Roger).

At 62, an intense look hidden behind huge, rectangular glasses, Ogot is now UNESCO's leading personality for the next two years. His aura of *"quiet force"* does not quite mask his brilliant mind. Indeed, he is a very highly qualified person. After graduating from the famous Makere University in Uganda, he went on to do his Master's at St. Andrews (Scotland) and obtained a doctorate in London. His career itself speaks volumes. Dean of the Arts Faculty of Nairobi University, visiting examiner at the universities of Cambridge, Upsala, Lagos and Harare, he also belongs to a plethora of scientific organisations, besides being on various committees of educational and cultural institutions.

It is because he is both a scientist and historian, the latter being the discipline he both trained in and practised, as well as knowing UNESCO inside out, that he was considered an ideal candidate for the post. The questions he raised in his address to the General Conference, almost gently, were fundamental ones, detached from the uncertainties of the moment, anchored in the upheavals of today's world, and as old as the Organisation itself. Referring to a possible *"new future"*, based on the *"cherished principles of pluralist democracy"*, he asked: *"are we ready and willing to apply them to the United Nations system?"*

Turning to the environment he asked: *"Are we to curtail further development in industrialised countries? And what are the developing countries supposed to do during the transition to sustainability?"*

His ready sense of humour was at hand when he underlined the necessity for intellectuals to be encouraged to consider UNESCO their organisation. *"The ancient Greek philosopher Aristotle said that people get the government they deserve. May I paraphrase that remark by asking the question: is UNESCO, as presently conceived and organised, what the Member States deserve?"*

One General Conference is obviously insufficient to answer that question but Bethwell Ogot still has two years to go.

René LEFORT

MEXICAN INSTITUTE WINS ECOLOGY PRIZE

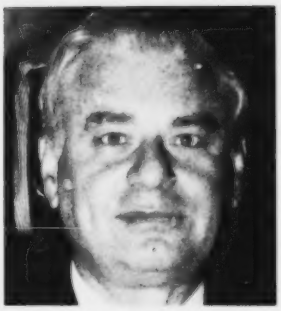
"An alternative approach to both conservation and development," was the way Dr. Gonzalo Halffter described UNESCO's Biosphere Reserve network.

Dr. Halffter is President of the Mexican Instituto de Ecologia , the first winner of the new Sultan Qaboos Prize for Environmental Preservation, in recognition of its pioneering work in using the biosphere reserve concept to elaborate what is now called the *"Mexican model"*.

"In most of the Third World," he said, accepting the Prize, *"it is unrealistic to establish classic national parks, whereas biosphere reserves, which safeguard biological diversity, respond to the needs of the inhabitants, with their full participation, is far better suited to the conditions of a developing country."*

The Prize of $20,000, created with a donation by His Majesty Qaboos Bin Said, Sultan of Oman, was presented on October 28, together with four other UNESCO Science Prizes.

Eight other scientists and research institutions were honoured at the impressive prize-given ceremonies. The first of two (1990 and 1991) Kalinga Prizes for the Popularization of Science went to Dr. Misbah-Ud-Din Shami, Chairman of the Pakistan Science Foundation. The second was shared by Romanian virologist, Dr. Radu Iftimovici, and physicist Dr. Narender Sehgal of India.



DR. GONZALO HALFFTER
(Photo UNESCO/I. Forbes).

The UNESCO Science Prize for *"outstanding contributions to the development of a developing Member State or region"* went to the Instituto Tecnologico Venezolano del Petroleo (INTEVEP) of Venezuela.

The Javed Husain Prize for Young Scientists, recompensing outstanding research carried out by scientists under 35 years of age, was awarded to biologist Dr. Zhang-Lian Chen (30) of China

Finally, the Carlos J. Finlay Prize for contributions in the field of microbiology was shared between Professors Margarita Salas and Eladio Viñuela of Spain, and Prof. Jean-Marie Ghuysen of Belgium.

Betty WERTHER

FOUR NEW MEMBER STATES

October saw the entry into UNESCO of LITHUANIA, ESTONIA and LATVIA. The newly independent Baltic states signed the Organisation's Constitution in London. Until 1940, these countries were independent and members of the League of Nations (the predecessor of the UN). For its part, TUVALU (Pacific archipelago) joined UNESCO on October 21, bringing the number of Member States to 163.

● **Before the DETERIORATING SITUATION IN YUGOSLAVIA,** several personalities present at UNESCO's General Conference multiplied their appeals for peace.

The President of the Executive Board, UN Secretary General Javier Perez de Cuellar and UNESCO Director-General, Frederico Mayor, urgently appealed on October 24, to the conflicting parties to begin negotiations towards a peaceful solution to the Yugoslav crisis. The next day, the General Conference, meeting in special plenary session called for immediate withdrawal of *"opposing forces from the city of Dubrovnik which is inscribed on the World Heritage list and whose splendour belongs to the whole of humanity"*.

TOGETHER FOR EVER (Photo UNESCO/Herzog)

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BIOSPHERE RESERVES : A GLOBAL LABORATORY

It was only in July 1989, at their Paris Summit, that the Group of Seven (G7) industrialized countries proclaimed the "urgent need to safeguard the environment for future generations." And yet, the danger signals have been with us for years : deforestation, pollution, extinction of species, "greenhouse effect", depletion of the ozone layer, dangers which jeopardize the development of whole regions, and not only threaten our well-being, but our very survival. UNESCO, moreover, launched its "ecological" activities as early as 1951 with a systematic study of arid zones, then nearly 20 years ago, set up the Man and the Biosphere (MAB) Programme.

This month's FOCUS is devoted to a major aspect of the MAB Programme - the Biosphere Reserve network. After describing its purpose and objectives (below), which, according to MAB Council President, Tânia Munhoz, aim at "reconciling economic development, the needs of the people, and the maintenance of a healthy environment" (p. 9), our correspondents describe four reserves representing different ecosystems - in Alaska (p. 10), eastern Germany (p. 11), Mexico (p. 14) and the Sahara (pp. 15-16).

During the course of this century, our relationship with the planet has undergone a profound change. Before World War I, human activity could be considered as just one of the many natural processes that are continually modifying the biosphere, the thin envelope of soil, water and air surrounding our planet to which all life is confined.

Today, however, with its vastly increased numbers and sophisticated technological skills, humanity has become a powerful geological force capable of bringing about major, and often unintended, changes in soils, in waters, among plants and animals and in the inter-relationships between all these.

In many respects this changed relationship has brought benefits. Life expectancy has risen throughout the world, advances in agriculture have made it technically possible to feed a growing world population, modern forms of transport and communication have increased world trade and brought the peoples of the world closer together and the conquest of space has made it possible for us to take a look at our planet as it were from the outside.

The unexpected side effects of huge population growth coupled with increased industrial activity have, however, reached the danger level. It must be remembered that human beings, and indeed all mammals, are entirely dependent on plants, since without the oxygen they produce we could not live. Yet we are decimating world forests by cutting them down for firewood and for industrial use and inflicting upon them the acid rain that our power plants induce.

AUTOMOBILES BELCHING

Our automobiles are belching out gases that are contributing to global warming and scientists are now generally agreed that the chlorofluorocarbons (CFCs) we use in our aerosols and refrigerators are not only powerful *"greenhouse gases"*. They are also responsible for the depletion of the ozone layer that protects us from harmful ultraviolet radiation from the sun.

A heartening sign, however, was the comparative speed and determination with which the world community reacted to the scientific investigation in November 1987 of a transient ozone *"hole"* over Antarctica. In April 1988 members of the Vienna Convention on the Protection of the Ozone Layer met in Vienna under the aegis of the United Nations Environment Programme to discuss ways of reducing CFC production and use.

In September, 24 countries came together in Montreal to sign a protocol which called for CFC production to be frozen at its 1986 level by 1990, to be reduced from that by 20 per cent by 1995 and to be cut a further 30 per cent by 1999. Then, as further research revealed that the area of ozone depletion was extending to the middle and high latitudes in both hemispheres, another conference was held in London, in 1990, at which governments agreed to phase out completely the production of ozone-destructive chemicals by the year 2000.

The credit for sparking off and sustaining public concern for the global environment must go to the landmark Biosphere Conference, organised by UNESCO in 1968, to the United Nations Conference on the Human Environment, held nearly 20 years ago in Stockholm, and to the World Commission on Environment and Development initiated by the United Nations in

1983, whose report, *"Our Common Future"*, was published in April 1988.

The Stockholm Conference was also preceded by the launching, in 1971, of UNESCO's Man and the Biosphere (MAB) Programme whose general objective was defined as *"... to develop within the natural and social sciences a basis for the rational use and conservation of the resources of the biosphere and for the improvement of the relationship between man and the environment; to predict the consequences of today's actions on tomorrow's world and thereby to increase man's ability to manage efficiently the natural resources of the biosphere"*.

One of the tools devised by MAB for the furtherance of its objectives was the establishment of a network of *"biosphere reserves"* for the *"conservation of natural areas and the genetic material they contain"*.

The biosphere reserve concept added an important new dimension to the much older system of National Parks (the first National Park, Yellowstone, was established in 1872). National Parks were traditionally established to protect sites selected for their beauty, their uniqueness and the recreational facilities they could offer, whereas biosphere reserves are first and foremost representative ecological areas (in which human beings are an integral element) and include examples of many of the great biogeographical provinces of the world. They also combine nature conservation with research, environmental monitoring, training, demonstration and local participation.

How are Biosphere Reserves Selected ?

To be selected as a biosphere reserve, a site must contain a minimally disturbed core area typical of biogeographic units and of value for conservation, plus additional land or water suitable for research and demonstration. National MAB Committees handle nominations, while final approval rests with MAB's International Coordinating Council.

There are now 300 biosphere reserves in 76 countries, covering an area of over one and a half million square kilometres - three times the size of France. Several million people, moreover, live in the reserves which are visited by tens of millions more each year.

As the network has grown over the years, so its objectives have been refined. With more and more plant and animal species threatened with extinction, preservation of bio-diversity has been given greater emphasis. The core areas (see diagram page 12) of the reserves remain largely untouched and the buffer zones are devoted to monitoring environmental change and traditional land use. Local participation has been encouraged by the introduction of co-operative development projects and the teaching of conservation in the transition zones and adjacent areas where the research work of the reserve is directly applied to the needs of local communities.

Sustainable development combined with conservation are the keynote of these projects, of which the UNESCO/UNDP project now under way in the Mananara Nord Biosphere Reserve, in Madagascar, is a typical example. Local rice production is being increased by the construction of mini-barrages on rivers in the area. This means that there is no longer any need to increase the size of the land under cultivation by clearing further areas of forest. The watchword of the scheme can be summed up as *"rice and forest not rice or forest"*.

The importance of this kind of conservation was underlined by the re-discovery, in 1989, in the Mananara forest, of live *Allocebus trichotis*, the hairy-eared dwarf lemur, long thought to be extinct.

With the recent addition of biosphere reserves in arid and semi-arid regions the network now covers well over two-thirds of the biogeographical provinces defined by Udvardy in 1975. They range in scope and size from the 300-hectare North Bull Island, in Ireland to the 2 million-hectare biosphere reserve in the Atlantic Forest, Brazil, to the 70 million-hectare Northeast Greenland reserve.

The network has a fully operational, computerised data base located in Cambridge, England, and research results are exchanged between reserves facing similar problems. With each reserve having a protected *"core"* area of minimally disturbed land providing baseline data which can be compared with adjacent areas that are being managed to meet human needs, the network is ideally suited to undertake environmental monitoring on a global scale.

Co-operation between reserves is exemplified by the exchange of data and of scientists between the Oka River Valley biosphere reserve, in the USSR, and the Southern Appalachians and Isle Royale biosphere reserves, in the US, where work on the establishment of standard research measurement norms is being undertaken.

Strangely enough, although the oceans are covered by the UNESCO's Intergovernmental Oceanographic Commission, with its ocean observatories system, and the atmosphere is covered by the World Meteorological Organization with its weather stations and its geostationary and polar-orbiting satellites, the United Nations has no permanent land monitoring sites and its Global Environment Monitoring Service (GEMS) obtains its information from a variety of sources.

The MAB Biosphere Reserve Network now seems ideally placed to become the chief source of regular, controlled information input to GEMS. Perhaps we shall soon see the MAB Biosphere network developing, in collaboration with GEMS, into a vast, natural, global laboratory, gathering and assessing the scale and rate of change in the biosphere and functioning as a huge early warning device on the look-out for looming disasters and undertaking the research that will enable us to stave them off.

Howard BRABYN

A WOMAN ON THE MOVE

Brazil's Tânia Munhoz combines dynamism with deep commitment to the environment, but realistically admits she "can't afford to be utopian".

The press room at the World Forestry Congress is chaotic ; full of journalists being briefed on the hows and whys of protecting and better using the incredible wealth of the Amazonian forest. The questions, coming in Spanish, French and Portuguese, are easily fielded by a small, bespectacled woman, dressed with simple elegance to deal with Paris' summer heat and, as it soon becomes evident, to allow herself maximum freedom of movement and speed.

For Tânia Maria Tonelli Munhoz, the first woman and Brazilian ever appointed Chairperson of the Intergovernmental Council for the Man and the Biosphere Programme (MAB), is undoubtedly someone who leaves those who try to follow her gasping for breath.

The mother of three sons, the youngest of whom is only eight years old, Ms. Munhoz has risen through the ranks to become one of Brazil's most important, and internationally visible, civil servants. Holder of a PhD in Human Geography and Space Organization, she joined the Brazilian administration in 1975 as a planning professional.

KEY ROLE

In 1987 she was appointed Coordinator of Urban Development and Environment, and, at the same time, designated representative of the Planning Secretariat of the Presidency of the Republic. As such she played a key role in the reshaping of her country's environmental policy, bringing it more into line with international concerns over the safeguarding of Amazonia and, at the same time, defending Brazil's needs and interests.

Although the environment was not her chosen direction, it has always been a factor in her work as an urban planner. *"We cannot plan on the basis of economics - growth rates, wages and the like - alone. The real questions that touch people's lives must also be taken into account."*

Her background, forthright character and an incredible capacity for work saw her named Director of Planning for the newly created National Environmental Secretariat in 1990, after which she served as President of the Brazilian Institute for the Environment and Renewable Natural Resources (IBAMA) which was largely responsible for the setting up of the first two MAB biosphere reserves in Brazil.

"The Tijuca-Tingu Orgaos and Vale do Ribeira reserves on the Atlantic coast clearly represent the new position taken by the government in support of the environment," explains Ms. Munhoz.*"But it's not just a sign from the politicians aquiescing to international pressure, but also of the new consciousness of the population in general.*

"We have, in the past, made a lot of mistakes with our natural resources. We went into the forest without really knowing what we were doing. Then we opened it up to settlers without enough forethought and destroying certain parts of it. But the fault is not only ours. What about the pressures that have been applied on Brazil to regulate its external debt, virtually obliging us to turn over huge areas of farm land for the cultivation of export crops such as soya, which we don't traditionally eat?"

For this dynamic, *"deeply committed"* woman, solving the contradictions between economic development, the maintenance of a healthy environment and the needs of people should be reinforced as the MAB programme's top research priority. *"We must act now and we must be more realistic in our goals. But we must also take a much more rigourous approach to research, asking ourselves why it is being undertaken and who it will serve. The researchers working in the biosphere reserves, for example, need to link their work even more closely with human beings."*

NEW WAVE OF THINKING

Her ideas are in line with a a new wave of thinking that is starting to emerge in scientific and political communities and which is rooted in a *"global vision"* of the environment and development, and which puts people first. *"I am not an ecologist, I am a civil servant who has always worked in planning and who works for the organization of the environment in Brazil. I cannot afford to be utopian. If anything, I am just pragmatic."*

While underlining the urgency of the need for action in this domain, she feels confident solutions can be found. Her enthusiasm for the job at hand and her open, friendly manner clearly serves to inspire and mobilize her staff and puts those with whom she comes into contact in the international arena immediately at ease.

"She is an extremely competent woman who doesn't mince her words and gets on with the job at hand," says MAB Secretary and Director of UNESCO's Ecological Sciences Division, Bernd von Droste. *"She also has the knack of transmitting her energy to those around her which makes for a very stimulating atmosphere."*

Her various responsibilities mean long days and frequent trips away from her home and family. *"But,"* she smiles ruefully, *"they have become accustomed to my comings and goings."* Any free time she manages to squeeze into her schedule is thus devoted to her husband and sons, especially the eight-year-old.

"He gets top priority," she said. *"We have a small farm in the country and when I have a little time free that's where we always head for..."*

Sue WILLIAMS

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ABOVE THE ARCTIC CIRCLE

Alaska's Noatak Reserve, a sensitive early-warning region for climate change and pollution.

The Noatak Biosphere Reserve, a high latitude Arctic and subarctic zone that includes all of the United States-managed Noatak National Preserve in North-Eastern Alaska, and part of the Gates of the Arctic National Park, is the largest natural, untouched river system in the U.S. Covering some 6.5 million acres, it lies entirely above the Arctic Circle, and is valued for its pristine ecosystem (including native subsistence hunters, caribou herds and predatory species such as the wolf, black and grizzly bears) and its importance as an early-warning region for the monitoring of global warming and pollution.

"The reserve has unique aquatic and other natural resources," says Dale Taylor, a biologist with the U.S. National Park Service who oversees park efforts to begin long-term studies of the ecosystem. *"It's an area that contains some of the unique vegetation that existed when the Bering Strait land bridge was still in place."*

The river begins deep in the Brooks Range, the northernmost extension of the Rocky Mountains, and runs to the Chukchi Sea. Almost totally surrounded and protected by the Baird and De Long mountains of the Brooks Range, the Preserve is the area of transition where the northernmost conifer forests end and the Arctic tundra begins. Under UNESCO's Man and the Biosphere Programme (MAB), the Noatak River basin is internationally recognized as one of the rarest of the high latitude regions.

Scientists looking at two significant global problems - global warming and global pollution - hope the Noatak will help answer a number of questions and offer some solutions. Already, there are indications that global warming may first show up in the Arctic regions. And scientists point to deposits of DDT, polychlorinated biphenyls (PCBs), pesticide and pesticide-residue byproducts turning up in some of the testing underway.

"The so-called 'general circulation' models being developed by climatologists all predict that the greatest increase in global temperatures - from 5 to 9 degrees Centigrade - by the middle of the next century will in fact occur here first," says Taylor. *"And the rate of temperature change will be a key factor. The same sources predict that this rate of change will be the most rapid ever recorded and that it will also show up first in the high altitudes."*

One of the goals of the global warming monitoring programme will be to establish baseline data for measuring future changes - at Noatak and in other ecosystems worldwide. *"The edge of the northern forests is already being tracked, and has moved south even in the last decade,"* said Taylor.

In the fall of 1992, a conference of scientists, ecologists and climatologists will convene at the Denali National Park and Preserve - another U.S.-sponsored biosphere reserve in central Alaska - to develop standards and step-up co-operation to measure and understand such changes.

In addition, pollution sampling has begun at Noatak under the auspices of the U.S. Environmental Protection Agency. Scientists at Corvallis, Oregon, are taking samples of mosses and lichen from a grid-pattern inside the reserve to test for toxic substances, and, according to Dr. Chad Gubala of the Corvallis Environmental Research Laboratory, *"preliminary results show the presence of DDT, PCBs, pesticide byproducts and other toxics."*

The scientists, monitoring what they call *"Arctic haze"*, are working to determine which of two conflicting hypotheses is accurate: whether the pollutants are moving up from lower latitudes, or whether they are drifting over the northern polar region from the industrialized parts of the central and eastern Soviet Union.

"It's very likely that the Arctic is contaminated," says Gubala, *"and even small levels of pollutants appear to have a large effect here, especially on the native inhabitants. Organic pollutants tend to concentrate in animal fats, and the Arctic is a fat-based ecosystem..."*

WORLD STANDARDS

Still in its early stages, the programme aims at establishing world standards for the monitoring of toxic substances in other circumpolar nations as well.

Since the biosphere reserve concept entails the study of a sustainable relationship between the land and people, researchers will have ample opportunity to observe the Inupiat Eskimo people, who have been living in the region for thousands of years.

The Inupiat village of Noatak lies just a few kilometres west of the biosphere reserve's border, and another settlement, the town of Kotzebue, where the U.S. National Preserve Headquarters is located, is just 30km from the southwestern most point of the reserve.

Besides pollution and possible global warming, human activity is responsible for other potential threats to the integrity of the Noatak. The reserve and other high latitude areas are undergoing rapid and accelerating social change. This means greater pressure to extract resources, growing non-native populations in Alaska's urban centres, and increasing demands for recreational facilities, particularly from sport hunters, with consequent strain on all wildlife refuges and preserves.

John ENDERS
Anchorage, Alaska (USA)

A NATURAL HAVEN

But United Germany has to keep it that way : the challenge of protecting the Spreewald biosphere reserve.

Only miles away from the hustle of metropolitan Berlin, set in the midst of highly-polluted eastern Germany, the shady banks of the Spree river offer a rare glimpse of a seemingly intact environment. With a little luck, visitors to the Spreewald (Spree forest) may spot the odd otter or a rare white-tailed eagle.

"It's a kind of zoological choice morsel," said Wolfgang Fremuth, of the Bonn-based Council for the Protection of the Environment and Nature (BUND).

The 374km2 area was one of four officially designated by the last government of East Germany as biosphere reserves under UNESCO's Man and the Biosphere (MAB) programme in September 1990, virtually on the eve of German unification. The move, which responded to citizens' initiatives, also included the creation of five national parks, increasing the total protected area from 0.17 per cent to over 4 per cent of the country's 108,333km2. United Germany has inherited six biosphere reserves covering over 3,000km2 from the former East German state. It has also inherited the challenge of reconciling the needs of people and nature in economically ailing and environmentally strained eastern Germany while keeping up with the staggering pace of change.

ALL ARTICLES ARE FREE OF COPYRIGHT RESTRICTIONS. SEE P. 3

PRIVATIZATION

An urgent task is to ensure a smooth transition of agriculture, at a time when an increasing number of co-operatives are being privatized. The sheer size of some of the co-operatives underlines the work involved in restoring and preserving natural resources. One former state-owned enterprise in the Rhoen reserve - at the former East-West German border - had over 20,000 head of cattle, more than the fragile environment could support. Many co-operatives have old equipment, designed for maximal exploitation of the land. Yet, in some cases, their infrastructure may be better suited to the biosphere reserve concept than private farming.

Recently, a large co-operative in the Rhoen reserve decided to turn the enterprise into a limited liability company (GmbH), which is now working closely with officials there. *"Co-operatives or single farmers in eastern Germany are often incapable of producing in a market-effective and environmentally sound manner without outside assistance,"* said Juergen Nauber, Secretary-General of the German National MAB Committee.

Farmers who have gone private may be tempted to use large quantities of pesticides and fertilizers to produce higher yields and thus repay the heavy loans they have taken. A major concern is to avoid such a trend, at least inside the reserves. *"Farmers must be paid for conservation work, that is derive benefits from preserving cultural landscapes,"* said Nauber.

But the European Community bans many forms of subsidies to discourage farmers from engaging in intensive production. In a bid to incite farmers to offer quality, rather than quantity, the authorities at the Schorfheide reserve on the Polish border are introducing a seal of origin - a move bound to succeed in a country where organically grown products are increasingly popular. At the inauguration of the Rhoen reserve on September 25, an official said it was absurd that milk produced in the region should be sold to Greece, where it is made into cheese and exported back to Germany. *"One strategy is to set up a local production and distribution system,"* said Nauber.

The changes will take time, a precious commodity in the battle against pollution. The contrast between the relatively clean, protected reserves and the rest of the country is much more evident in eastern Germany. *"Our biggest worry is that these havens, too, could be destroyed,"* said Fremuth.

The Spreewald, with its centuries-old canal system is home to a few hundred otters, but warned Gerhard Kneitz, a spokesman for the BUND Fauna and Biotope group the Spree otters are also threatened and have virtually disappeared from western Germany. Rising traffic and tourism and - worst of all - the spreading open-pit brown coal mining are the main dangers. The Spreewald authorities face a major dilemma: the huge pits suck up the underground water, crucial to the forest and its fauna. But even if the mine were closed down, water would have to be pumped to the surface for several years to avoid a drying-up of the forest, which would destroy habitats, including those of cranes and rare ospreys. The mine closure might also prove unpopular because of spiralling unemployment.

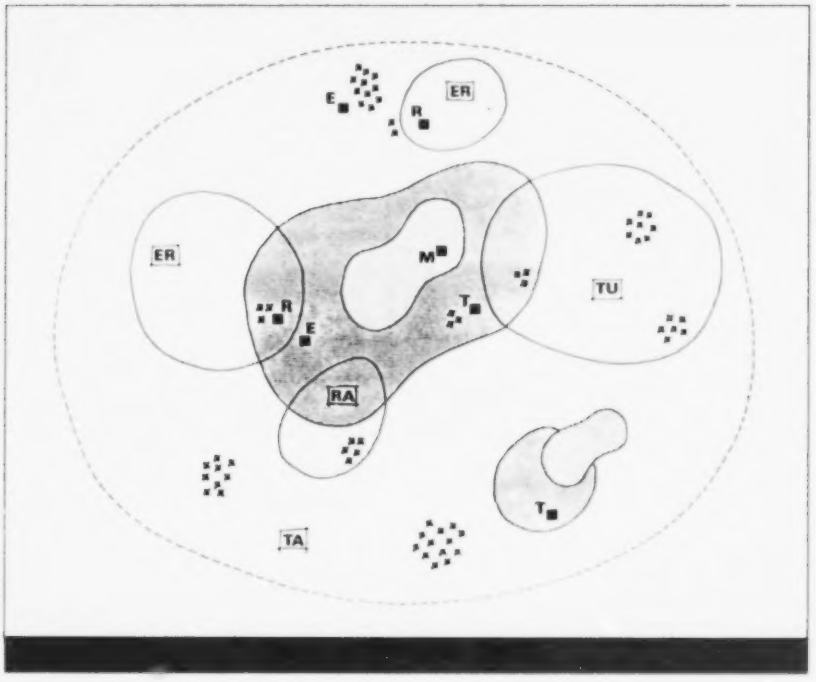
Tourism is another problem. Long a popular day trip for East Berliners, the Spreewald now draws visitors from the entire city. But officials hope to develop the kind of *"soft"* tourism compatible with the biosphere concept. Some of them admit their first concern, during the rush to unification, was to ensure that large areas would be protected under the biosphere reserve *"label"*. Now the battle is on to restore and preserve these areas.

Patrick MOSER
Bonn

THE BIOSPHERE RESERVE NETWORK :

Wherever they may be located, whatever ecosystems they enable us to protect and monitor, biosphere reserves fulfil an essential function.

THE FUNCTIONS OF A BIOSPHERE RESERVE



As the theoretical diagramme shows, the functions of a biosphere reserve can be divided into three interrelated zones.

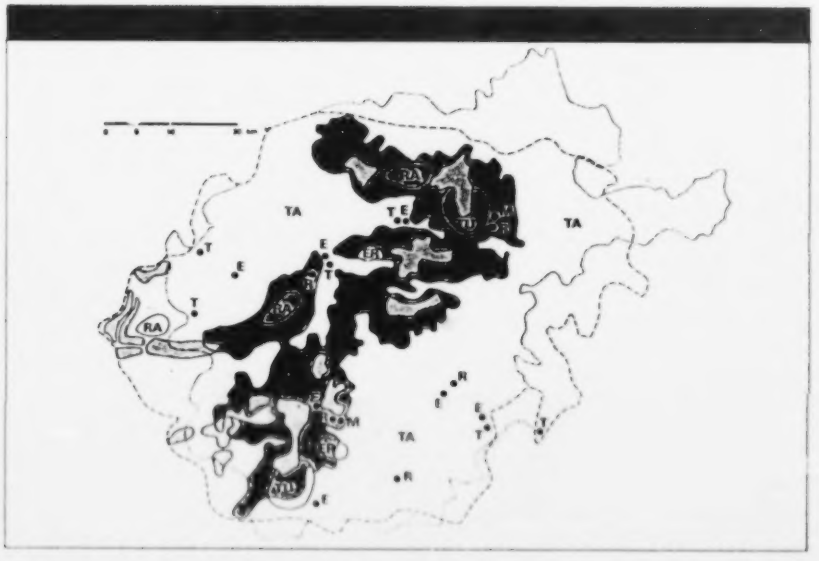
The first *"a core area"* is strictly protected so that it can fulfil its role: conservation (pale grey). The only activities carried out here relate to monitoring (M).

The *"buffer zone"* , a strictly demarcated area (dark grey in the diagramme) is used for rigorously controlled and non-destructive activities, such as tourism, research, training and education and rehabilitation (respectively referred to as T,R,E and RA).

The outermost part of a biosphere reserve is the *"transition area"*, which typically surrounds the core area and buffer zone. Activities carried out here include experimental research (ER) and traditional use (TU) of the reserve.

The signs "xxx" indicate the location of human settlements.

THE CEVENNES BIOSPHERE RESERVE AND NATIONAL PARK (FRANCE)

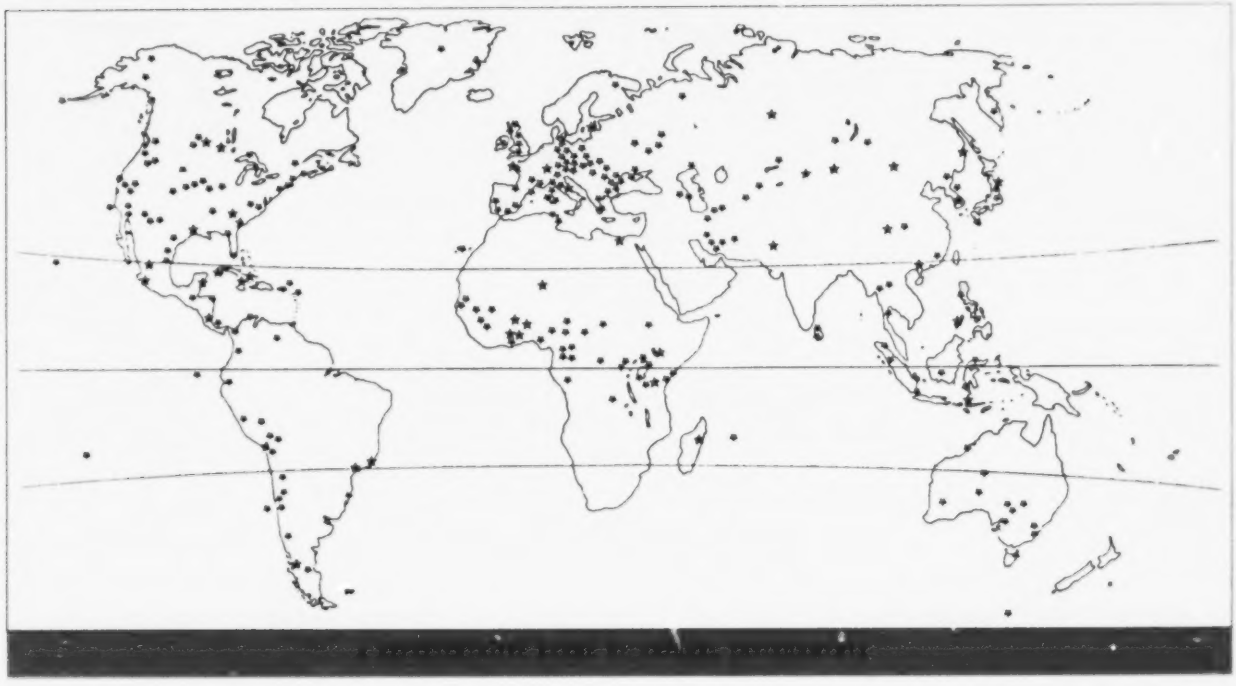


As the diagram shows, this is both a biosphere reserve (traced in dashes) and a national park (traced in dots). The multiplicity of ecosystems and the longstanding presence of human beings result in a more complicated version of the three-zone diagramme.

The Cevennes biosphere reserve and national park, in the extreme south-east of the Massif Central, has been inhabited since megalithic times. Around 40,000 permanent residents live in an area of some 3,230 km2. Therefore, besides protecting the fauna and flora, extremely rich because of the area's geological and scenic diversity (the altitude can be as high as 1700 metres and the climate both mediterranean and continental), the essential thrust is on maintaining an equilibrium between human activities and the environment.

MICROCOSMS OF OUR ENVIRONMENT

THREE HUNDRED IN 76 COUNTRIES



The map above shows approximate locations of the MAB biosphere reserve network. It is not possible to include all the biosphere reserves in Europe, where some countries have up to 17!

The first reserves were set up in 1976. They have steadily progressed since then and today there are 300 such reserves in 76 countries.

A strict procedure has been laid down for the selection of a biosphere reserve. National MAB committees are responsible for preparing biosphere reserve nominations, which are then presented to MAB's International Coordinating Council which meets once every year.

This map can be read in two ways and hence lead to opposing analyses. It is true that reserves are unequally spread out. in the world. Europe is over-represented, whereas very important bio-geographical systems are not. A case in point is the Amazon basin, and in Brazil, as the president of MAB's Intergovernmental Council, herself from Brazil explains, sensibility to environmental questions is relatively recent (see p.9).

Similarly, there are not enough reserves in most of South and South-East Asia. On a more global level, tropical humid areas (swamps, estuaries, etc) and coastal zones are usually under-represented simply because they are greatly coveted by human beings.

On the other hand, the map does prove that there are a minimum number of biomes - biomes are major types of environments - so that MAB's network of biosphere reserves eventually covers the entire planet, permitting us to monitor the evolution of the environment on a global level. So far, there's no sign that there are too many reserves.....

The first two diagrammes have been taken from Michel Batisse's article published in "Nature and Resources", Vol. XXI No. 3. The map was drawn by MAB programme.

IT ALL BEGAN WITH WILD MAIZE

The Sierra de Manantlan Reserve combining conservation and social development.

The discovery of a variety of wild maize was at the origin of a biosphere reserve in western Mexico, a region with a rich biological heritage. This totally accidental discovery was made by biology student Rafael Guzman in 1977.

The Sierra de Manantlan has extensive woodlands, a valuable natural resource that risks depletion because of indiscriminate exploitation. Paradoxically, in the midst of such great wealth, the local people are still living in dire poverty and conditions of extreme social exclusion.

When, a year later, Guzman went back to the area accompanied by botanist Hugh Iltis, he was able to confirm that the *Zea perennis* which he had stumbled on was indeed *teosinte*, the *"ancestor"* of maize, that Albert Hitchcock had discovered in 1910. More important, however, the two men discovered another similar species which they named *Zea diploperennis*. This new find was to have unexpected repercussions on the flora and fauna and the relationship between people and nature in the Sierra de Manantlan.

This plant, which has the same number of chromosomes as cultivated maize - *Zea mays* is ideal for hybridization. It is also a source of genetic innovation for the second most important crop in the world.

Zea diploperennis soon became an attractive and revolutionary genetic proposition. In addition to being immune to seven of the nine viral diseases that affect maize, it grows well in wet and poorly drained soils. A sturdy plant, it could appreciably lessen the erosion sometimes caused by the cultivation of this crop, which feeds between 15 and 20 per cent of the world's population. Subsequent research has shown that *Zea diploperennis* may well enrich the dangerously small gene reserve of modern maize species. Specialists think it is a very important genetic resource and agricultural discovery.

Known by local farmers as *milpilla*, *chapule* and *chapule maize*, and used occasionally for food, this wild member of the maize family is now protected. To quote the biologist Gonzalo Halffter, a scientist of international repute *"it would only have taken a few cows grazing in the few places where it grew..."* and we would not be telling this story.

Thanks to the work of Dr Halffter and a group of scientists from the University of Guadalajara, this plant has now been saved from extinction and the biosphere reserve has seen the light of day.

Set up in March 1987, the Sierra de Manantlan Biosphere Reserve covers an area of 137,000 hectares in the Sierra Madre del Sur, its altitude ranging from 400 to 2,960 metres. The climate is cold and temperate but the ecosystem also encompasses tropical vegetation and forests - over 2,150 plant species, 336 species of birds (a third of the avifauna of Mexico), 108 mammals, 73 reptiles, 30 amphibians and 16 fish. The region is home to a quarter of Mexican mammal species, including several protected animals. The area is covered by eight types of vegetation, from tropical forests to huge conifers, some of which are threatened varieties.

SUSTAINABLE DEVELOPMENT

Moreover, the Sierra directly concerns the lives of some 32,000 people who live from subsistence farming, exploiting forest products to supplement their income.

But Manantlan also has its problems. The penetration of market economy was fatal for traditional economic systems and cultural values. The unregulated exploitation of timber brought profits to enterprises and local potentates, but after 40 years, the agricultural communities of the sierra are still plagued by poverty and backwardness. This has led to serious social and agrarian conflicts concerning ownership of land and control of natural resources. Moreover, the local flora and certain varieties of precious wood are seriously threatened by over-exploitation. Preliminary studies indicate that up to 300 plant species are used in one way or the other, for construction, fuel, food and medicinal purposes.

In order to change this situation, scientists from the University of Guadalajara who administer the reserve, are trying to convince the authorities of the need for a project to act as a catalyst for regional development of a more intelligent kind, in which the human factor would take precedence over financial gain. The main thrust is to ensure consultation between farmers and reserve officials. Individual participation thus becomes a central factor.

Through an approach that integrates conservation and social development, Dr Enrique Jardel, from this university, and a group of colleagues from the Laboratorio Natural (Las Joyas de la Sierra de Manantlan) want the reserve to be an experimental model for a type of rural development based on a rational and sustainable exploitation of natural resources, compatible with the conservation of biological diversity and the maintenance of ecological processes essential to the life of our planet. In short, a model of what the rational management of biosphere resources should be like on a global scale.

Carlos FAZIO
Mexico City

WHERE HAVE ALL THE GAZELLES GONE

The world's greatest open-air museum, the Tassili Reserve, is a magnet for tourists - but will they treasure the trove ?

Only a few thousand years ago, elephants, giraffes, hippopotamuses, buffalos, rhinoceros and antelopes wandered freely over the rich, tropical savannah of the Sahara region. Paintings found on the natural walls of this unique site, the Tassili plateau in southeastern Algeria, bear witness to the fauna that once lived in the region.

From a south-western angle, the plateau rises from the sand dunes like a huge natural fortress. The 600 metre sheer rock-face stretches over an area of over 700 km. Immense and wind-sculpted, the chaotic rockmass breaks the monotony of the plateau where powerful rivers have etched out canyons and valleys. The tourist can admire the crystalline formations which date back to the pre-Cambrian era. Far below, the gorges are full of pink sandstone, their colour contrasting sharply with the surrounding yellow sands. Fossils from 450 million years ago are deeply incrusted in the stone.

Water everywhere, a vestige of the region's rich past, hidden underground, serpentine in the depths of the canyons. Springs, *"guellas"*, *"oueds"* and sometimes little lakes or rivers. There are even waterfalls, with extremely pure water in the valley of the Iherir.

Migratory birds take a break in the oasis where all life is concentrated: fish, reptiles, batrachians, rodents and birds of prey. The last crocodiles - of Nilotic origin! - of the region were killed in the 40's. Both the flora and the fauna are at the crossroads of various types of vegetation - oleander and tamarisk grown alongside olive trees, lavender and Mediterranean myrtle - you also find the Saharan date palm and tropical acacia.

In Tamrit's *"cypress valley"*, some hundred varieties of this tree have been catalogued. As well as the last cypresses of Duprez (it is believed there are less than 250) which exist nowhere else, some of which are over 2000 years of age.

It is exceptional when rain awakens long dormant seeds scattered around the area. But not for long - the aridity quickly kills off the young shoots. Around thirty vegetal species and five mammals are considered threatened by extinction.

The visitor can also admire the strange lines that crisscross the gorges of Tamrit, Sefar or Tin Tazarift. Human beings lived here during five or six thousand years. Their paintings, remarkably conserved because of the practically dry atmosphere, are eloquent testimony to the unsuspected natural richness of a region which today is the world's biggest desert. Tassili is the world's largest and most beautiful open-air Neolithic museum.

The rock paintings highlight the passage from gathering to primitive agriculture, from hunting to cattle raising. Bovines and horses are depicted in the frescoes, giving way as the region progressively dried up, to oryx, gazelles, ostriches, camels and Asian dromedaires.

Groups of Touareg, nomadic and sedentary, have lived here for centuries, many of them still faithful to their traditional culture. They continue to use the Tifinagh alphabet, that one can find in certain inscriptions in antique frescoes. Their traditional dwellings, the "zéribas", constructed with locally available material, are unique in the world.

The Tassili N'Ajjer national park was created by the Algerian government in 1972 in order to protect the beauty and cultural importance of the site. Ten years later, it was included in UNESCO's World Heritage list. In 1986, it was transformed into a biosphere reserve in order to preserve the area's richness and original mode of development. "Classical development types are totally unapplicable here", underlines French specialist Bernard Bousquet, a UNESCO consultant who defines himself as an ecologist.

The task is daunting. The park is one of the biggest in the world - spread over 80,000 square kilometres, it does not have sufficient means in terms of trained personnel and infrastructure.

Water, the source of all life, has to be protected. So have the fauna and vegetation, both offshoots of a wet past. Their resistance and capacity to adapt could well be a goldmine of information for scientists. As Bernard Bousquet underlines: *"each new mission leads to the discovery of new species (insects in particular) we didn't know existed in the Sahara"*.

Species that have become extinct or are under threat have to be reintroduced to the region. Gazelle and ostrich breeding has to be promoted. There has been an attempt to

grow Tassili cypresses in Europe and then reimplant them in the plateau - drought has prevented these trees from growing naturally in the region.

TOURISM: A DOUBLE-EDGED SWORD

Tourism, the area's biggest chance of success may yet prove to be the cause of its downfall. It could be the vector for the development of the whole region and stimulate local craftsmanship - the area is tailormade for such possibilities - the attraction of the desert, the savage beauty of the landscape, some 5000 rock paintings, the originality of the Touareg culture.

However, tourism like research, presupposes a code of good conduct - a rigorous respect for the environment and its works of art. The opening out of the region (road connections, an international airport was built in Djanet, a town of some 5000 inhabitants) has to be treated cautiously. Because reality is often another ballgame: untrammelled tourism, unauthorised research, plants being torn up and in some cases, the degradation and looting of prehistoric and protohistoric artworks. Frescoes are dampened so as to photograph them, but at the risk of damaging them for ever. Sometimes, they are even torn down.

People swim in the rare sources of water. Driving around indiscriminately in 4-wheel drives and motorbikes, they destroy valuable grazing land for the Touaregs and rare vegetal species such as the Jericho Rose, destabilise the dunes and leave behind tons of garbage.

In Bernard Bousquet's words: *"The Sahara is fashionable these days, but car rallies are surely not the best way of appreciating the region's treasures"*.

Most tourism agencies are not concerned with the preservation of a site which they consider a *"ghost-park"*. Smugglers pollute the road which links Ghat, in Libya, to Djanet, by lighting fires, often at the foot of rare trees and leaving behind plastic, cloth and cans.

Bernard Bousquet has sounded the alarm in view of the fact that development of infrastructure, roads in particular, can provoke immense damage unless certain basic precautions are taken. The indiscriminate use of water for road construction and neighbouring agglomerations can only upset an already fragile equilibrium.

For thousands of years man has lived and worked in harmony with nature. Together, they have left an indelible imprint on the land. Traces that can be read in the landscape and in the life of the inhabitants of the region. A unique collective testimony, its preservation has no price and and discovery certainly does not imply callous disregard.

Nicolas Michaux

TO FIND OUT MORE ...

The MAB programme has a wide range of material on biosphere reserves for both specialists and the general public, including:

BIOSPHERE RESERVES: an informative folding brochure and poster explaining the functions of the Biosphere reserves and incorporating a map of the world which shows the location of Biosphere reserve sites. Also available in French and Spanish.

INFOMAB: a MAB information bulletin published twice yearly with updated reports on MAB's projects as well as reports from the National Committees.

A PRACTICAL GUIDE TO MAB: tells you what MAB is, how it works, how one gets involved and who is responsible for what.

MAB PROGRAMME: Biennial Report 1987-1988. Contains articles on various MAB projects. A special article on Biosphere Reserves, the backbone of the MAB programme on page 25.

MAN BELONGS TO THE EARTH: a UNESCO/MAB puublication, it provides a semi-popular account of the MAB programme as it stood in 1987. A wide-ranging report, it does not however cover all areas of activity within MAB. It provides inisghts and examples, but is not an overall balance-sheet.

DEBT FOR NATURE EXCHANGES AND BIOSPHERE RESERVES: part of the MAB Digest Series, it provides background to the origins and workings of the debt-for-nature instrument. It attempts to asses the benefits, constraints and future prospects as perceived by different interest groups.

ECOLOGY CHRONICLE: The report offers twenty-four "windows" on the MAB programme as it unfurled during the period 1989-1990. It provides insights into the social fabric of ecology and its manifestation in various geographical settings.

UNESCO ENVIRONMENT AND DEVELOPMENT BRIEFS - this series is intended to improve the communication of scientific information. Addressed primarily to decision-makers, it provides a readable overview of global issues in this area. Each brief focuses on a single theme and the one that has just come out deals with Debt-for-Nature Exchanges.

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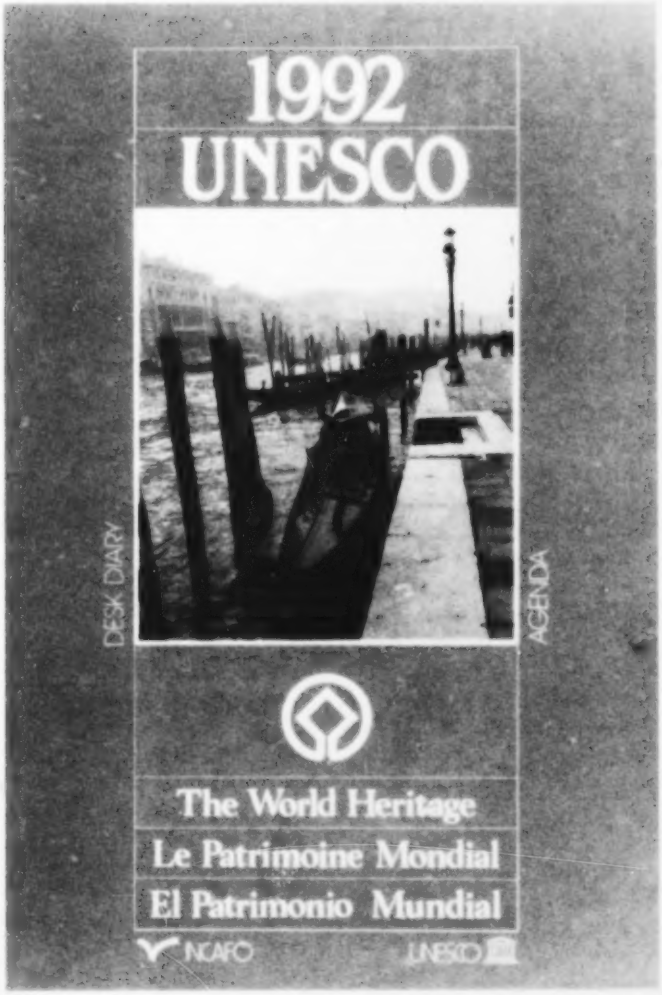

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THE ONLY WAY OUT

Education for the millions of Street Children around the world.

Suleymane, a 14 year-old shoeshine boy in Dakar, far from his native village, has a dream : that one day he will be able to go to school, learn enough to get a better job and earn enough to help his poor village build a health care centre.

Suleymane is one of the millions of street children around the world who are not in school but want to learn and want it desperately. Some have been to school but dropped out due to poverty or poor grades, others have never seen the inside of a classroom. Abandoned, orphaned or victims of war, street children have no money for school uniforms or school fees and must usually resort to odd jobs to survive. With no political power, they often face abuse, violence or sexual exploitation. Sometimes they are even killed by the police or private militias. *"Going to school is my only way out,"* says Suleyman.

To examine the do's and don'ts of educating street children, UNESCO organized, in collaboration with UNICEF, a seminar in Paris from September 30 to October 4. Twenty-five people, representing U.N. agencies and NGO project managers with first-hand experience, participated. The seminar was part of UNESCO's priority programme to promote basic education for street children and other disadvantaged groups. Focusing mainly on research, technical support for innovative projects and exchange of information, UNESCO is reinforcing its cooperation with UNICEF and NGOs in this area.

"Education is essential to help the child develop confidence and self-esteem," said Alphonse Tay, sociologist and UNESCO programme specialist. *"And unless a street child starts believing in himself, there is not much hope for a better future."*

Obtaining statistics on street children is tricky, because they rarely appear in surveys and their very existence is often denied by authorities. Estimates range from 30 to 100 million. One hundred million - the equivalent of the population of France and the United Kingdom together!

"Governments are extraordinarily ineffective in reaching street children," said Peter Dalglish, executive director of Street Kids International, a Canadian-based NGO. *"Many governments are in confrontation with the kids, rather than helping them. I find it unbelievable that seals in my country (Canada) have more rights than kids in the cities of Africa, Asia and Latin America."*

Most projects are run by small local NGOs which often have insufficient staff and resources to reach out on a large-scale. As one participant put it : *"We are only a drop in an ocean of need."*

What makes a programme for street children work? It should combine, participants stressed, general literacy and numeracy with job skills, political education, art such as dance and drawing, moral values, legal rights, and health and nutrition.

"One of the lessons we have learnt is that you cannot develop an educational programme for street children identical to the formal school system," says Ezra Mbogori, director of the Undugu Society in Kenya. *"We are dealing with kids who have been forced into adulthood quicker than any of us can imagine"*.

TEACHERS HAND-PICKED

The Undugu Society offers tuition-free curriculum (approved by the Ministry of Education) which, after three years, allows good students to enter the regular school system. Teachers are normally hand-picked from slum areas, and given special training. Those who succeed best, participants said, are often not professional teachers and social workers but former street children who have first-hand knowledge of the kids' environment.

One of the main issues facing educators today is AIDS prevention. According to CHILDHOPE, an international advocacy movement for street children, the number infected with the Human Immunodeficiency Virus (HIV) is reaching *"alarming proportions."* Studies in Brazil, Sudan and the United States show HIV-positive rates to be between two and 10 percent for street youth. In Brazil, public health officials describe AIDS as a *"time bomb"* .

Street Kids International took up the challenge. In close cooperation with the National Film Board of Canada and WHO, they created the Karate Kids, a cartoon which is now available in 17 languages and shown in 70 countries. The key to its success? The film is entertaining as well as informative. The kids want to see it over and over again.

●

UNESCO HAS JOINED THE PIN FAD by creating two models on the occasion of the 26th session of the General Conference of Member States. The pins are available at the UNESCO gift counter or by order for 30FF each plus mailing costs.

* *Philatelic & Numismatic Programme.*

▼

"UNESCO should elaborate and promote A **NEW APPROACH TO DEVELOPMENT PROBLEMS** *closer to socio-cultural realities"*. This recommendation was among several adopted at a meeting of experts on the Cultural Dimension of Development, at Headquarters from September 16 to 18. Given the inadequacy of existing development models, the participants called on UNESCO to formulate *"a new language of development based on the principles of cooperation, partnership and mutual benefit"*. A project can lead to sustainable development, they said, only if it is planned and implemented with full knowledge of people's values, and is responsive to their needs.

●

Two Canadian institutions have joined the UNESCO Institute for Education (UIE) to launch an INTERNATIONAL AWARD FOR RESEARCH IN ADULT LITERACY. The winner, whose manuscript will be published in English, French and Spanish, will receive $10,000. Manuscripts should reach UIE before December 1, 1991 (Feldbrunnenstrasse 58, W-2000 Hamburg 13, Germany.)

When discussing education for street children, one question obviously arises : how does one attract them to classes when every hour away from work means less money to survive ? *"You have to strike a deal,"* says Nicolas Fenton, Director of CHILDHOPE. *"You have to tell them that 'If you come two hours a day to our centre, we will in turn help you to survive better'"*.

Another approach - that of bringing non-formal education into the workplace - has been tried in Pakistan where employers have agreed to release their under-aged employees from work one to one and a half hours earlier in order to attend classes.

"Of course, what you really want to tell these employers is to stop exploiting the children," says Marie de la Soudiere, a UNICEF consultant in Islamabad. *"But then they would just get angry and turn off. Our 'friendly' approach often works. One carpet manufacturer even offered to provide space and the salary of a teacher ."*

Although educational programmes vary in direction and scope, one constant remains : no programme can be successful if the teachers do not first gain the children's trust. Or as one participant put it :*"We know we are on the right track when the children stop lying to us."*

"Inside a street child, who gives the appearance of being tough and difficult, is a child who has never experienced what it is be to loved, and what it is to be human," says Christina Noble, an Irish woman who two years ago, opened up a medical and social centre for abandoned babies and street children in Vietnam. A former street child herself, she spent countless night in alleyways and under bridges between the age of 10 and 16, and knows what she's talking about.

"Most street children have never trusted an adult because it is always the adults who have let them down," she said. *"When appearing to be kind, adults are always after something, often sex."*

That is why educating the children can not take place in a vacuum. What is equally important is to educate the community. One UNICEF-assisted project in Mexico, for example, trained not only 500 street and community educators but also 700 policemen. This is essential, said a participant, *"because if you don't have the policemen with you, little can be done."*

"It is hard to find adults who are as smart as the kids," says Dalglish. *"Because street kids are smart, very smart."* And he tells the story of the homeless children who were part of a U.N.-assisted project in a camp on the Thai-Cambodian border some years ago.

As there was a serious problem with rats there, the project leaders got the good idea of telling the kids that for every rat they brought to an incinerator, they would get a small amount of money. By doing so the kids would feel that they contributed to their community as well as earning some money. Well, what happened? The kids started breeding rats.

Cila UNGERTH JOLIS

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A FUND FOR HIGHER EDUCATION IN LEBANON has just been set up by UNESCO and the Association of Universities Entirely or Partially using the French language (AUPELF). Aimed at enabling Lebanese universities to come out of their long isolation, the fund will help train professors, encouraging them to remain in Lebanon, and incite others to return. UNESCO will provide technical and administrative help for the fund-raising campaign to which AUPELF has already contributed 500,000 FF ($85,000).

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EDUCATION FACING THE CRISIS OF VALUES was the theme of a workshop organized in Budapest from October 10 to 13 by the Hungarian Academy of Sciences and UNESCO. After discussing cultural, ethical and aesthetic aspects, the participating educators, scientists, artists, etc., recommended that education encourage *"world citizenship"* and adopt an intercultural approach to the construction of peace, a spirit of tolerance, and democracy.

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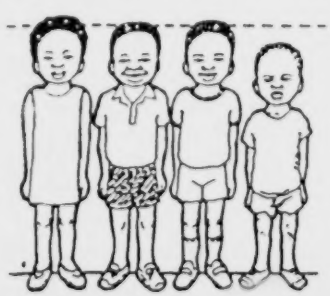
A CHILD-TO-CHILD APPROACH to health education is presented and developed in just-published *Children, Health and Science*. The fully-illustrated 122-page document, No. 41 in UNESCO's Science and Technology Education Series, it explains how children can take health action for themselves and pass on their knowledge and skills to other children, their families and the community by, for instance, learning how to check a child's growth, choose healthy food, care for teeth and eyes, see that water is clean and safe, or again give effective first aid.



"SEE HOW THEY GROW", ILLUSTRATING A LESSON IN "CHILDREN, HEALTH AND SCIENCE".

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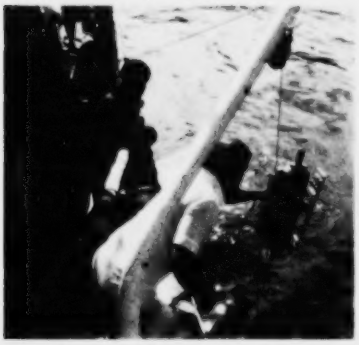
ANALYSING DATA ON POLLUTION of Brazilian coastal waters, upswelling off Australia or phytoplankton distribution in the Arabian Sea - this is what students of marine science will be able to do thanks to a free computer training module published by UNESCO.



The module teaches how to analyse remotely sensed data. Recipients must commit themselves to distributing the module further, either on institutional computer networks, or by making copies of the diskettes and distributing them - for free - to interested third parties.

☛ *Unesco Marine Sciences Training and Education Programme*

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JAMES D. HALLORAN OF GREAT BRITAIN is the winner of the 1991 McLuhan Teleglobe Canada Award. Former president of the International Association for Mass Communication Research, Professor Halloran is known for his pioneering work in communication studies and his contribution to scientific cooperation in this field. His work deals mainly with the social and political impact of television, education through television, media and violence. The $50,000 award is presented every two years by the Canadian Commission for UNESCO in association with Teleglobe Canada Inc. under UNESCO auspices. It is awarded in recognition for exceptional contributions to furthering the understanding of the influence of the communications media and technology on society.

WANAD: THE LAST LEG

In its final phase, after helping create and develop 13 West African news agencies, WANAD could well be resurrected.

A vast project for building national press agencies in West Africa will enter its final phase in a few weeks. WANAD (West Africa News Agencies Development) was set up with a sum of $8.5 million donated by Germany. It has been largely responsible for the creation of four national news agencies in Mali, Niger, Guinea, and Gambia. It has also contributed to the development of nine others: Congo, Ivory Coast, Benin, Burkina Faso, Ghana, Guinea Bissau, Nigeria, Togo and Sierra Leone.

Former project co-ordinator, Babacar Fall, currently at UNESCO Headquarters in Paris, recalls how WANAD took off. *"Initially, my problem was to link remote areas to the rest of a country, then to find a motivated young journalist and train him so that he could make either a success or a failure of a vaccination campaign in Agedes, on the edge of the Ténéré desert, or in Nattitingou, bordering Atacora, to make an interesting bit of news available to the news agency network."* He takes a deep breath and continues: *"That was not all. I had to find a motorbike or a small four-wheel drive car for the journalist to go looking for news in the remotest village. Finally, help his news desk acquire the necessary means, in financial, technical and human terms, to transmit this information to various subscribers, such as radio, television, newspapers, etc. News agencies were in a terrible state. But invariably, we found professionals who believed in news agencies and their role in information systems."*

In eight years, over 500 people were trained either as journalists or as technical staff. Journalists were able to specialise in economic and financial reporting, as well as in the areas of health, environment, rural development and international relations. Technicians were trained in the maintenance and reparation of equipment in a special regional workshop set up at project headquarters in Cotonou, Benin. Agency directors were given regular sessions in management.

MODERNISING INFRASTRUCTURE

Technical infrastructure was not neglected either. Networks for the collection and distribution of information were set up on a national scale. Today, there are some 350 news collection branches in rural areas, which cover the countryside of the 13 countries involved and their 170 million inhabitants. Slowly but surely, rural populations are becoming less isolated from the national communication networks. What appeared to be a leap into the unknown in

1984 when the project took off, is now a concrete reality for professional people in the region. *"Before WANAD, when something happened here in Tombouctou, I would give my article to a truck driver or a bush taxidriver heading for Bamako, the capital. It could take up to two or three weeks before it reached the news desk,"* recalls a correspondent of Mali's news agency. *"When WANAD set up a radio communication link with Bamako, I felt like a prisoner who 's just been freed. Prison, infact, was the lack of communication with the rest of the country or the world. Today, thanks to the wire service, articles from Tomboctou directly reach the Mali news agency or the Panafrican News Agency (PANA). I tell myself this city, with its glorious past, can continue to live. I still have problems with petrol and repairs, but this is nothing compared to the situation six years ago"*.

The project's member agencies function rather well at the moment, but with varied levels of development. They transmit between 20 and 80,000 words per day. They are fed principally by international agencies such as AFP, Reuters, PANA, TASS, etc. Together, correspondents based in the various provinces and journalists at the news desk (between 10 and 60 depending on the agency) churn out news concerning all aspects of national life, from the cultural to the political - a complete news service, greatly appreciated by subscribers.

The principal source of an agency's budget is from the sale of its services. Up to now, this has been supplemented by government subsidies. This trend, however, has tended to diminish each year, thus enhancing the agency's autonomy and editorial independence. This is obviously a development encouraged by the project which stresses self-reliance. As far as finance is concerned, in 1994, some agencies will be totally independent.

THE END OF THE TUNNEL

The project enters its final phase between 1992 and 1994 - seen as a period of consolidation, it will also be marked by the entry of three new countries - Cape Verde, Mauritania and Senegal. The computerization of news agencies will get underway and the project will become an institution.

Already last September, the first computerised system of the treatment of dispatches was set up at the Benin news agency in Cotonou. A second such system has been inaugurated at the Ghanaian news agency in Accra. Both agencies can now handle over 350,000 words coming in daily, and transmit an average of 80,000 words to their subscribers. The transmission of news has also been computerised. In 1992, four other agencies will be computerised, and by 1994, the rest would have followed suit.

TOWARDS PERMANENCE

As for institutionalisation, that is the transformation of a project into a permanent structure at the service of news agencies and other media in Africa, it will ring the death knell of WANAD.

Paradoxically however, it will pave the way for its resurrection, in another form. As all projects have to end sometime, WANAD expires in 1994. UNESCO has already received several requests from radio and television stations, newspapers and other institutions calling for the project to be opened up to other forms of communication.

This was echoed at the seminar on press freedom and pluralism organised by the United Nations and UNESCO in April 1991 in Namibia, where private press directors in Africa asked UNESCO to do everything possible to make WANAD accessible to them as well. It has to be underlined that since 1984 the project has focused exclusively on the region's news agencies. WANAD's institutionalisation will therefore strengthen the independent press in Africa and simultaneously serve as catalyst for the development of other media, that is radio and television.

Similar desires have been expressed by the directors of the 16 news agencies. They have called on UNESCO and Germany to seriously consider transforming the project into a regional training institute during or after the consolidation period.

"It's in the agencies' interest to back the development of this nascent press because it means more subscribers for us. In commercial terms, this will be a big breakthrough for us. Most of all, it will mark the success of the project, which now belongs to the history of the African press", underlines one agency director who participated in the last management seminar in September 1991. ■

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The UNESCO-IMC (International Music Council) PRIZE was awarded on October 1 to Japanese composer Toru Takemitsu and French musicologist Jacques Chailley. Takemitsu's work is characterised by his unique combination of western and oriental instruments. His *"Requiem for string"* (1957) was called a masterpiece by Stravinsky.
Chailley, an ethnomusicologist specialising in the Middle Ages and Ancient Greece, is also a composer. His most recent work, *"Casa Dei"*, was premiered last summer at the Chaise-Dieu Festival (France).

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Paying hommage to ***THE GREAT GERMAN SINGER ELISABETH SCHWARZKOPF,*** France's ambassador to UNESCO, Jean-Pierre Angremy said: *"Listening to you, seeing you on stage...and our musical education was completed"*.
A concert was organised in her honour by the International Music Council on October 21 at the Grand Amphithéatre de la Sorbonne in Paris.

ELISABETH SCHWARZKOPF (Photo UNESCO/Inez Forbes).

The concert featured the Berliner Mozart Ensemble with sopranos Adina Nitescu (Romania) and Sharon Coste (Canada) as well as Colombian harpsichord player Rafael Puyana. Hommage to Elisabeth Schwarzkopf also came from UNESCO Director General, Federico Mayor, who gave her UNESCO's Mozart medal.

IDEAS GALORE

Youth NGOs, meeting in Romania, plan for the future.

Literacy projects, workshops for cultural heritage preservation, youth exchanges and youth worker training were amongst topics discussed by 80 representatives of youth movements meeting in Suceava, Romania, from September 14-22.

Some 60 international youth organizations representing millions of members, together with a dozen Romanian groups, took part in the 17th Joint Consultation for non-governmental youth organizations. This annual gathering, organized by UNESCO alternatively in Paris and in a Member State, is the only formal consultation for youth NGO's within the United Nations framework.

A forum for reflexion and dialogue, concerning the activities of NGO's and UNESCO, the meeting provided an opportunity to examine the Organization's youth programme *"from both ends"*, according to Pierluigi Vagliani, Director of the Organization's Youth Division : in other words, both as regards future projects and current operations. UNESCO is developing an international exchange service for data on youth movements (INFOYOUTH - see item left).

RESTORATION PROJECTS

The debates which took place in Suceava, the old capital of Moldavia (from 1375 to 1565) 430 kilometres north of Bucarest, were aimed at producing concrete results, such as the participation of young people in literacy programmes.

Youth workshops are also to be set up to restore monasteries, amongst the finest in the world, in the historic region of Bukovina. In the past, very little effort had been devoted to this heritage, defined as *"religious"* by the former regime. In addition, the relevant ministries in Romania have designed a large number of restoration projects and drawn up a list of monuments to be submitted to the World Heritage Committee.

The meeting in Suceava also led to bilateral agreements between Romania and youth associations. For example, the International Federation of Training Centres for the Promotion of Progressive Education signed two protocols for training neighbourhood youth workers and association organizers. The World Scout Movement undertook to step up its activities in Romania, by providing aid in the form of training and equipment.

This Consultation was the first to be organized in a country which, since the fall of Ceaucescu in December 1989, has seen a proliferation of youth movements : 47% of Romania's population is under 25 years old.

"Everything has to be done from scratch, to be reinvented in a country which has gone through such a traumatic experience as ours" said one participant, who heads the student league at the University of Iasi. *"Young people are obliged to take their own affairs in hand, which explains the emergence of all these associations, but we must think about our strategy, establish our priorities and learn to dialogue"*, he added.

Taran Carmen, who belongs to a pantomime troupe in a Timisoara secondary school, explained : *"We need training and we need exchanges with other groups who are going through the same experience elsewhere. But we ourselves have ideas galore."* ■

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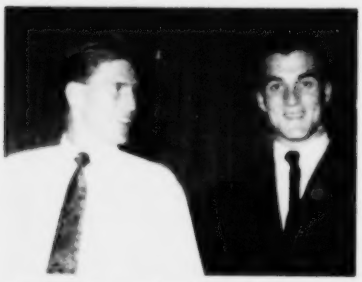
The 1990 FAIR PLAY CHAMPIONS are footballer Dino Zoff (Italy) and canoeists Ian Lawler and Graham Burns (United-Kingdom). They were awarded the International Pierre de Coubertin Fair Play Trophies at UNESCO Headquarters on October 7. Dino Zoff, Italy's national team's goal-keeper was singled out for the sporting spirit he showed throughout his career. During the 1990 kayak-racing world championships, Lawler and Burns helped their main rivals, allowing them to win the race. Aimed at highlighting exemplary behaviour in the field of sport, the trophies are awarded each year, under UNESCO auspices, by the International Committee for Fair Play.



LAUREATS BURNS (LEFT) AND LAWLER (Photo UNESCO/Inez Forbes)

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INFOYOUTH, UNESCO's International Centre for the Exchange of Information and Data on Youth Movements is being set up in Paris suburb Marly-le-Roi, according to an agreement signed on October 17 between the French government and UNESCO. The Centre will aim at making the condition and socio-cultural needs of young people better known, and to analyse and compare initiatives taken by young people in response to these needs. The French government is providing the location, personnel and equipment to launch INFOYOUTH, but the collaboration of other partners (governments, governmental and non-governmental organizations, foundations, etc.) is indispensable.

A MESSAGE HAMMERED HOME

Old tools are still good tools - Glyn Roberts' original project for aid to the Third World.

"Think tool!" This slogan was coined by British sociologist, Glyn Roberts, the founding father of a highly original yet simple project for aid to the Third World : to collect old tools and give them to artisans in poor countries. The association he founded 12 years ago in his country has just celebrated the gift of its 250,000th tool. It was handed over to the Ambassador of Tanzania in the United Kingdom at an official ceremony in early October. Glyn Roberts' initial idea, when he was on mission to Tanzania as a UNESCO consultant in 1978, was *"to collect old tools"* to help the Third World. He could see just how short of equipment the peasants were. *"Fifty million tools were rusting away in garages, workshops or sheds in Britain"* he said, while millions of Africans had no implements to work with.

From the outset, this idea received support from UNESCO. Its *"Co-Action Programme"*, which collects private funds, has raised a total of $45,000 to help this project. The association relies on about 50 groups, with a total of some 500 members. Through its exhibitions, collections or other events, it is able to mobilize between 2,000 and 3,000 people in England. As charities go, the association, which is called *"Tools for self-reliance"*, is rather unusual. It grants membership with the right of vote to all those who participate in its projects, whether they are from Nicaragua or Sierra Leone, so as to involve them as closely as possible.

ON-THE-SPOT PRODUCTION

Self-reliance ? This principle has quite logically led the association to go further than merely passing on donations and to encourage on-the-spot repair and production of tools. The funds raised through UNESCO and the movement's activities have helped to set up and equip small workshops mainly in Tanzania (a total of 80) but also in Zimbabwe and Uganda. Metal has also been supplied to workshops in Guinea-Bissau. According to Glyn Roberts, a total of some ten thousand people have benefited from the work done by his movement, although he adds that this is only a *"rough estimate"*.

In any case, he stresses that it would be an illusion to think that this aid alone is *"the answer"*. *"Actually 50,000 tools a year is really very little in comparison with the needs, which run into millions"*. His association's budget for 1990 shows that its only income is derived from private donations and aid from UNESCO. It receives no public aid, and Glyn Roberts deplores the indifference of big international organizations.

"The World Bank or UNDP, with their vast resources, should help with the simple production of tools. But if you ever see the word 'tool' in one of these organizations' documents you may be sure that it is being used figuratively. Academics are not interested in tools," but adds Roberts for good measure, *"we don't mind getting our hands dirty"*.

Yet a tool has so many advantages : it is easy to handle, it can be repaired, it does no damage and creates no pollution.

The association's target is to reach one million tools by the year 2,000, 270,000 of which would be produced on the spot.

We have not heard the last of Glyn Roberts and his friends as they hammer home their message.

Nicolas MICHAUX

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Proceeds from a benefit concert performed by **THE SYMPHONY ORCHESTRA OF LITHUANIA** at Headquarters on October 22, will go to UNESCO's Chernobyl programme for three rehabilitation centres in Byelorussia, Ukraine and the Soviet Union. In addition, Canada, among donors meeting on September 20 at UN Headquarters to help the Soviet Union deal with the consequences of the nuclear disaster, announced a contribution of $500,000 to the same UNESCO programme.

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UNESCO and Electricité de France, EDF, are jointly organising ***TWO ROUND TABLES TO DISCUSS ENERGY*** systems in Eastern Europe. Issues raised by economists at the meeting include the reparation and reconstruction of nuclear and electric power stations. The first session of *"the strategic issues in a reform of the energy systems of Central and Eastern Europe"*, as the round tables are officially called, was held at UNESCO Headquarters on October 7-11 and focused on the Soviet Union, Romania and Bulgaria. Participants from these countries described existing energy systems, the problems and uncertainties of the future, and the need for international cooperation. The second round table will be held in the first week of December and focus on Czechoslovakia, Hungary and Poland.

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Graphic conception: Agence Minium.

Two **INTERNATIONAL DAYS** will be celebrated in December throughout the UN system: **WORLD AIDS DAY** on the 1st and **HUMAN RIGHTS DAY** on the 10th. Four meetings will be organized by the **INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION**: from December 2 to 4 at Headquarters, a session of experts on the Global Ocean Observing System (GOOS); the 7th session of the Joint IOC-WMO-CEPS Working Group on the Investigation of "El Nino" from 2 to 7 in Cartagena (Colombia); from 7 to 9, a symposium on "Marine Science and the Management of Marine Areas of the Western Pacific" in Penang (Malaysia); and from December 16 to 19 at Headquarters, the IOC-UNEP intergovernmental working group on the Global Investigation of Pollution in the Marine Environment (GIPME). Under the **MAN AND THE BIOSPHERE (MAB)** Programme, an International Conference on Land/Water Interactions will be held in New Delhi (India) from December 7 to 14. The 15th Ordinary Session of the **WORLD HERITAGE COMMITTEE** will take place in Carthage (Tunisia) from December 9 to 13. An International Symposium on **WOMEN AND DEMOCRACY IN THE COUNTRIES OF CENTRAL AND EASTERN EUROPE** will bring together about 30 experts from both eastern and western Europe, in Prague from December 3 to 6 to exchange experiences and analyse the problems of women stemming from transition to a market economy. In the context of follow-up to the World Conference on Education for All (1990), the 4th Collective **CONSULTATION ON [illegible] on LITERACY - Education for All**, will be attended by some 200 specialists, at Headquarters from December 9 to 13. Twelve **YOUTH LEADERS** selected in all regions for projects they have elaborated to combat illiteracy, unemployment, drugs and Aids, will present their projects at Headquarters from December 9 to 13. A training workshop on Regional **STRATEGIES** in **EDUCATION** with Special Focus on Development Strategies will be held in Bangalore (India) from December 10 to 12.

Our **NEXT ISSUE** will focus on **HIGHER EDUCATION**, its quality, pertinence and role in society, particularly with regard to the needs of universities in developing countries.